

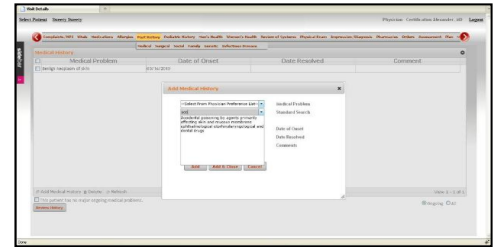


MFSCCombo Plug-in

A jQuery custom combo plug-in

Executive Summary

The idea to develop a custom combo plug-in evolved when Mindfire, working for a client, had bought a combo control from a third party as a license for one of its project. To eliminate the involvement of third party suppliers for these requirements, and to create a light weight combo control which can be used as a custom text box, Mindfire Solutions decided to develop it in-house. Mindfire's developers researched a lot for the solution and finally developed a custom combo in jQuery to meet demands of project.



This custom combo developed named MFSCCombo, provided a cost effective solution to the client without any dependency of third party control and simultaneously acted as an open source to our entire clientele. It is a combination of drop-down and text box and is a perfect fit for any ASP.Net website developed with jQuery and wcf. The use of plug-in reduced coding time for clients and the code is re-usable off the shelf. It takes less time to load and has cross browser compatibility. Thus, Mindfire provided client's with a better and efficient means of combo control.

About our Client

Client Mindfire Solutions Internal | **Location** BBSR, India | **Industry** IT Services

Business Situation

One of our clients had the requirement of using a combo control which we had to buy as a license from third party to use it in the project. This made us think of avoiding third party controls over the plug-in and develop one in-house so as to use it for other projects as and when required. After a long round of discussions within the team, Mindfire took initiatives in developing it. The requirement was to develop a lightweight combo control which would load records on demand and also can be used as custom text box. This plug-in needed to act as open source for our entire clientele, and the code to be re-usable. Thus, carrying this objective in mind our development team started work on it.

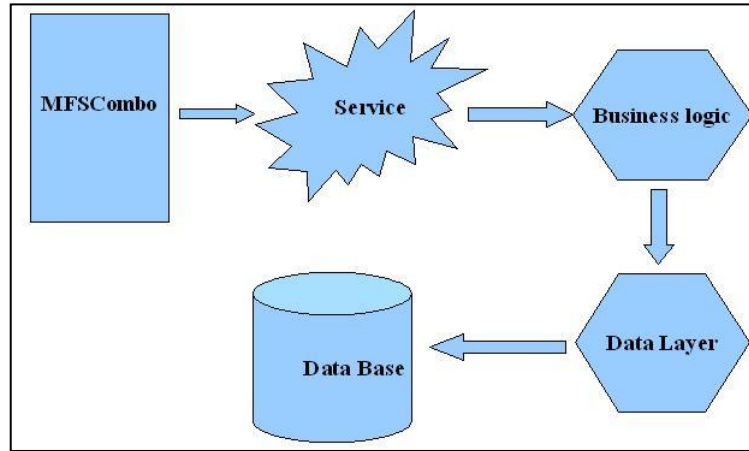
Solution Details

The Mindfire Solution

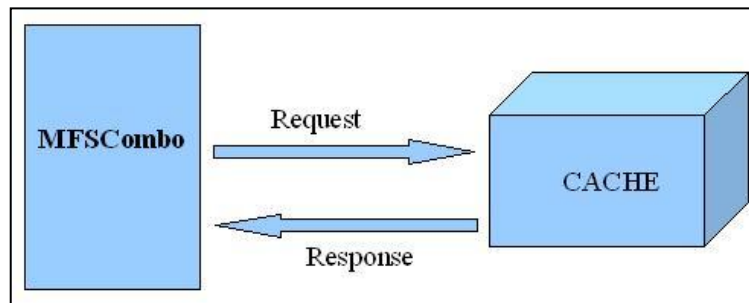
After having the goals set, Mindfire's development team started researching on different areas in order to meet their requirements. Finally, the quest for developing a plug-in was over as a lightweight combo control named



MFSCombo was developed that loads records on demand at a faster pace. This solution developed is a combination of drop down and text box and is the best fit for any ASP.Net websites developed with jQuery and wcf. To develop the plug-in, Mindfire had to prepare a flow diagram at first which is shown below:



Flow Diagram 1: MFSCombo binds to Data Source



Flow Diagram 2: User types for suggestion

The key feature of the combo developed is, it's simple to use and is faster, having cross browser compatibility. Service Oriented Architecture (SOA) has been followed with jQuery being used to achieve the functionality. Caching has been employed to store the data. Only first time data has to be loaded from server to cache in client side and then referred for the suggestions, ids, and values from cache only. It fetches its items in key-value pair and displays only 20 items by default. On request of more it then refers to cache again. A "get more" button has been implemented to get the next 20 records. Debouncing technique has been applied to search for the suggestions only after the typing has been completed. This means it will not search for suggestions (from cache) for every key press event. It has the functionalities like get text by passing values, getting values by passing text etc. In case of multiple combo controls in a page, some are populating with same dataset, they can directly use the cached data bonded earlier for other combo controls.

Thus, the development of this plug-in could help clients as well as Mindfire's development team in numerous ways.



Achievements

During the development phase of this plug-in, Mindfire's technical team had to face a number of challenges. There was a need to make the custom text functional at the same place. In order to make these operational, files were made editable. Cache reading was another area which was a tough job to conduct but, our team was efficient enough to overcome the barrier. Another area of concern was the Admin set-up to be done so that right data is entered into master list when a user is typing in the freeform box. This concern was tactfully handled by our team and the plug-in developed resulted to be a stable and efficient one to be utilized in future projects.

Technologies

Visual Studio 2010, .NET 4.0, C#.Net, jQuery 1.3.2, WCF.

Final Results Software System

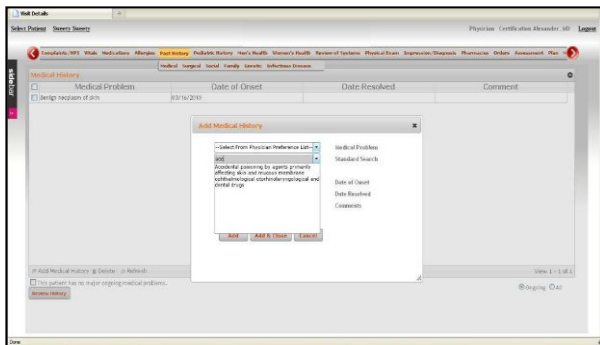


Fig 1: Medical MFSCCombo

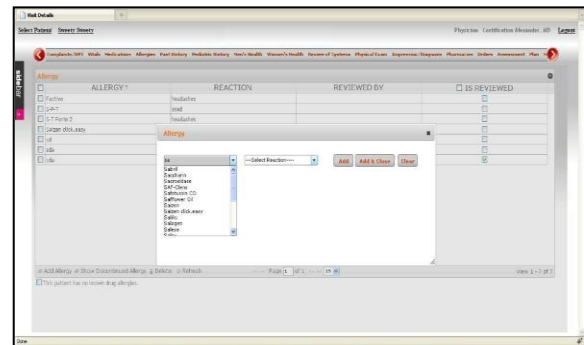


Fig 2: Allergy MFSCCombo

Customer Benefits

The introduction of MFSCCombo provided a cost effective solution to the client without the intrusion of third party control over the plug-in. Also, this plug-in developed was open source for all our clients which allowed clients to edit the code. The biggest advantage was that this plug-in was very light. So, it took less time to load and also cached everything that it gets from server.

This plug-in also provided some benefits to Mindfire as it reduced coding time and also provided an opportunity to re-use the code every time they come across any such project where this combo has to be used.



Future relationship

Mindfire has given a new direction to the development arena and is committed to develop more such helpful plug-ins in the future that will be of help to this industry.

